



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,007	02/08/2002	Shigenori Fukasawa	Q68471	6451
7590 12/10/2003			EXAMINER	
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			HSIEH, SHIH WEN	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/068,007	<b>Applicant(s)</b> FUKASAWA ET AL.	
	<b>Examiner</b> Shih-wen Hsieh	<b>Art Unit</b> 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 3,4,6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some    \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7-2303</u> | 6) <input type="checkbox"/> Other: _____                                    |

### ***Response to Amendment***

#### ***Claim Objections***

1. Claim 7 is objected to because of the following informalities:

Lines 3-4 recites: "the guide projection" and line 4 recites: "the guide groove".

While "a guide projection" and "a guide groove" are recited in claim 3. Claim 7 does not depend on claim 3. Therefore, a minor lack of antecedent basis problem occurs.

Appropriate correction is required. Examiner's suggestion: claim 7 depends on claim 3 can solve this problem.

#### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,315,468 B2 ('468). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a platen gap adjuster/platen-gap regulating device, which are used to relate a print head cleaning operation to the platen gap information. Below is a table, which tabulates claims from both cases for comparison:

<u><b>10/068,007</b></u>	<u><b>6,315,468 B2</b></u>
1. An ink jet recording apparatus comprising: an inkjet recording head mounted on a carriage for jetting ink droplets in accordance with print data; and a capping device for capping a nozzle forming surface of the recording head; wherein when the carriage is moved to a mount portion where the capping device is mounted, the capping device is moved toward the nozzle forming surface of the recording head by receiving a driving force which moves the carriage, so that the capping device caps the nozzle forming surface; and a stopping position of the carriage in the mount portion of the capping device is adjusted based on adjustment information of a platen gap adjuster.	1. An inkjet recording apparatus comprising: ink jet recording heads for discharging ink droplets in accordance with print data; a capping unit which seats said recording heads and for receiving a negative pressure from a suction pump, a cleaning member for wiping a nozzle opening surface of said recording heads; a platen-gap regulating means for adjusting a space between the recording heads and a printing medium in proportion to the thickness of the printing medium, and a control mean for driving said platen-gap regulating means to hold a fixed relative position between the recording heads and said capping means and the recording heads and said cleaning member when said recording heads are located in a cleaning position.

In viewing of the above table, instant application uses a platen gap adjuster to adjust a carriage stopping position. While patent ('468) uses a platen-gap regulating means to regulate a space (or gap) between the head and a printing medium in

proportion to the thickness of the medium. Also in patent ('468) a gap between the heads and a capping device can be judged to be a predetermined distance in proportion to the thickness of the printing medium. In another words, the thickness of the printing medium decides the gap between the heads and the capping device. So far, one can understands that claim 1 of the instant application talks about the same thing with that of claim 1 of the patent ('468), only using different languages. Because the stopping position of the carriage in the instant application is a position of the carriage where the carriage mounted with print heads are on top of the capping device so as to allow the capping device to either cover the heads or maintaining a distance away from the heads. Or, zero gap or gaps of a certain dimensions are formed between the heads and the capping device. This gap development is in related to the space/gap information between the platen and the printing medium, and this space/gap information between the platen and the printing medium is varied based on the thickness of the printing medium. Therefore, once a thickness of a printing medium is decided, then the platen-gap regulating means or the platen-gap adjuster will send a gap/space information to the controlling device so as to set a gap or stopping position of the carriage between the head mounted in the carriage and the capping device.

Therefore it would have been obvious to a person having ordinary skill in the art to understand that although the recitations are used differently between the instant application and the patent ('468), they are, however, invent the same thing as those discussed above and in the "Response to Arguments" section below.

Art Unit: 2861

4. Claims 9 and 11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,315,468 B2 ('468). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a platen gap adjuster/ platen-gap regulating device, which are used to relate a print head cleaning operation to the platen gap information. Below is a table, which tabulates claims from both cases for comparison:

<u>10/068,007</u>	<u>6,315,468 B2</u>
9. A moving position control method of a capping device adapted to an ink jet recording apparatus comprising an ink - jet recording head mounted on a carriage for jetting ink droplets in accordance with print data, and the capping device capable of capping a nozzle forming surface of the recording head, wherein when the carriage is moved to a mount portion where the capping device is mounted, the capping device is moved toward the nozzle forming surface of the recording head by receiving driving force of the carriage, the moving position control method comprising the steps of: judging a flushing requirement as to whether or not the flushing operation is required; acquiring a platen gap adjustment information from a platen gap adjuster if the flushing operation is required; adjusting an interval between the nozzle forming surface of the recording head and the capping device at a flushing position by controlling the moving position of the carriage to a mount portion of the capping device based on the platen gap adjustment information;	3. A head cleaning control method in the ink head recording apparatus which comprises ink jet recording heads for discharging ink droplets onto a printing medium in accordance with print data, a capping unit for sealing said recording heads and for receiving a negative pressure from a suction pump, and a cleaning member for wiping the nozzle opening surface of said recording heads, said head cleaning control method comprising the steps of: judging a gap between said nozzle opening surface and said capping unit upon receiving a cleaning instruction for said recording heads; <u>controlling said gap to be a predetermined distance in proportion to the thickness of the printing medium;</u> and cleaning said recording heads with one of said capping means and said cleaning member upon completing said gap control step.

<p>and flushing ink droplets from the recording head into the capping device, while maintaining the interval.</p> <p>11. A moving position control method of a capping device adapted to an ink jet recording apparatus comprising an ink jet recording head mounted on a carriage for jetting ink droplets in accordance with print data and a capping device for capping a nozzle forming surface of the recording head, wherein when the carriage is moved to a mount portion where the capping device is mounted, the capping device is moved toward the nozzle forming surface of the recording head by receiving driving force of the carriage, the moving position control method comprising the steps of: judging a capping requirement as to whether or not the ink jet recording head is required to be advanced to a capping condition; acquiring a platen gap adjustment information from a platen gap adjuster if the capping operation is required; and controlling the moving position of the carriage to a mount portion of the capping device based upon the platen gap adjustment information.</p>	
--	--

The difference between claim 9 of the instant application and claim 3 of the patent ('468) is:

The instant application has a judging a flushing requirement.

A flushing operation is a well known operation in an ink jet printer, in which heads of the printer are brought to an area, which is generally outside of a printing region, where a device such as a container, spittoon, spit pad or a cap is disposed. The heads receive a flushing signal in this position to elect/discharge ink droplets from its nozzles toward the device as in a printing process does so as to clean the nozzles. This is so-

called head recovery/cleaning process and it is done regularly according to such as time elapsing/ink droplet ejected/pages being printed, etc. The capping operation in the patent ('468) may contain a flushing operation, however, not being explicitly specified. Nevertheless, a flushing operation performed by the heads toward a device outside the printing region is a part of the head cleaning process. In this flushing operation, the cap can maintain either an abut position against the head or away a certain distance. Then the signal applies to the head to activate the ink ejection/discharge, refer to MPEP 2144.03, In re Malcolm, 129 F.2d 529, 54 USPQ 235 (CCPA 1942).

No discussion is made to claim 11 of the instant application. Because a capping requirement is controlled by a control scheme stored in a ROM in the printer. The control scheme can be based on: time elapsed from a previous recovery/cleaning operation, or how many ink droplets have being ejected, or how many pages are printed, etc. The rejection to this claim can also be covered by the rejection to claim 9 discussed above. Because in a capping operation by whatever the control scheme is designed, a flushing operation can be performed or a purging operation can be performed.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –



Art Unit: 2861

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishida et al.

The applied reference has a common assignee (Seiko) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regard to:

Claim 2:

Kishida et al. teach:

the capping device including a slider (10a and 10b, figs. 1 and 2) which is moved toward the recording head (5 and 6, figs. 1 and 2) by receiving at least the driving force which moves the carriage, and;

a cap member (8 or 9, figs. 1 and 2) mounted on the slider for capping the nozzle forming surface of the recording head, wherein when the carriage is moved, the driving force which moves the carriage is transmitted from a side of the carriage to a side of the

Art Unit: 2861

slider through a driving force transmitting device which abuts against the slider, refer to col. 4, lines 50-67.

Claim 5:

Kishida et al. further teach:

wherein a flushing position where the capping device is located opposite to the nozzle forming surface of the recording head with a predetermined interval and a capping position where a nozzle forming surface of the recording head is capped by the capping device, are set based on adjustment information of the platen gap adjuster, refer to col. 2, lines 57-62; col. 10, lines 54-61 and col. 11, lines 9-17. Examiner's note: a flushing operation in an ink jet printer is a well known operation in the ink jet printer field, in which a print head containing nozzle(s) of the printer moves to a location generally located outside a printing region to eject/discharge ink droplets by a signal applied to the head to a device such as a container, a pad, a spittoon or a cap. This operation is generally conducted under the head maintains a distance to the device receiving the ejected/discharged ink droplets. Also, a capping operation is also well known in the art, in which the capping device abuts the print head containing nozzle(s). Under this condition, the following things can be done: first, applying a suction force by a pumping device to the capping device in order to suck debris, viscous ink, etc. out of the nozzle(s). Or, by applying a signal to the head to eject/discharge ink from the nozzle(s). Both cases are called head recovery/cleaning process and are used commonly in ink jet printers. Although Kishida et al. do not specifically teach a flushing operation, it is inherently contained in their invention as part of their cleaning operation.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being obvious over Kishida.

The applied reference has a common assignee (Seiko) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed

Art Unit: 2861

but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2). A spring member interposed between the slider and the cap member so as to bias the capping member against the print head is well known in the art.

In regard to:

Claim 8:

The device of Kishida et al. DIFFERS from claim 8 in that it does not teach:

wherein a spring member is interposed between the slider and the cap member; and the cap member abuts against the nozzle forming surface of the recording head by receiving a urging force of the spring member in a state that the nozzle forming surface is capped by the capping device.

As discussed above, a spring member interposed between the slider and the cap member so as to bias the capping member against the print head is well known in the art, refer to MPEP 2144.03, In re Malcolm, 129 F.2d 529, 54 USPQ 235 (CCPA 1942).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Kishida et al. to include a spring to be interposed between the slider and the capping member as most of the printer do for the purpose of providing a biasing force to assure the capping member hermetically seals the head by this spring urging force.

Claim 10:

The device of Kishida et al. DIFFERS from claim 10 in that it does not teach: wherein a judgement of the flushing requirement is started based on a time counting operation of a flushing timer which is managed while print operation of the recording apparatus is carried out.

A timer used in an ink jet printer to control a head recovery/cleaning operations based on a time elapsed counted by the timer from a previous recovery/cleaning operation or a previous printing operation are well known in the art. Flushing operation is one of the head recovery/cleaning operations, refer to MPEP 2144.03, In re Malcolm, 129 F.2d 529, 54 USPQ 235 (CCPA 1942).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Kishida to include a time device as most ink jet printer do so as to provide a timer cleaning operating based on an time elapsing.

***Allowable Subject Matter***

9. Claims 12-15 and 16-18 are allowed.

10. Claims 3, 4, 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

In regard to:

Claims 3 and 4:

The primary reason for the allowance of claims 3 and 4 is the inclusion of the limitation of a guide projection formed on the slider is slid along a guide groove formed in the frame in an inclined manner, whereby the slider is moved toward the recording head. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Claim 6:

The primary reason for the allowance of claim 6 is the inclusion of the limitations of in the case that the adjustment information of the platen gap adjuster indicates that a

Art Unit: 2861

platen gap is small, the guide projection formed on the slider is regulated to be retained at a lower position within the guide groove formed in the frame under inclined condition at each of the flushing position and the capping position, as compared with such a case that the adjustment information of the platen gap adjuster indicates that a platen gap is large. It is these limitations found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claim 7:

The primary reason for the allowance of claim 7 is the inclusion of the limitation of wherein the ink jet recording apparatus is arranged in such a manner that the regulating operation for retaining the guide projection at a predetermined position in the guide groove is performed by stopping a drive operation of a carriage motor for moving the carriage in the reciprocation motion. It is this limitation found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 12-15:

The primary reason for the allowance of claims 12-15 is the inclusion of the limitation of when a flushing operation is carried out in the flushing area, the flushing control unit adjusts an ink jetting amount of one dot during the flushing operation based upon adjustment information of a platen gap adjuster. It is these limitation found in each of the claims, as they it is claimed in the combination that has not been found, taught or

Art Unit: 2861

suggested by the prior art of record, which makes these claims allowable over the prior art.

Claims 16-18:

The primary reason for the allowance of claims 16-18 is the inclusion of the method step of an ink amount setting step for setting an ink jetting amount of one dot during a flushing operation based on platen gap adjustment information in such a case that the flushing requirement judging step judges that the flushing operation is required. It is this step found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



Art Unit: 2861

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Response to Arguments***

13. Applicant's arguments filed on July 23, 2003 have been fully considered but they are not persuasive.

Regarding to double patenting rejections, Examiner respectfully disagrees to Applicants' argument. Therefore, the double patently rejection maintains. The reasons are as follow:

First talking about the Kishida et al.'s reference, please refer to claims 1 and 3. In these two claims one can find out that:

The platen-gap regulating means is used for adjusting a space (or rather a gap) between the recording heads and a printing medium in proportion (or in response to) to the thickness of the printing medium. From this statement above, it can be concluded that a number of spaces (or gaps) information will be developed based on the thickness of the printing medium.

Then a control means for driving said platen-gap regulating means to **hold a fixed relative position** between the recording heads and said capping means and the recording heads and said cleaning member when said recording heads are located in a cleaning position. Examiner contends that the bold face underlined portion in the above statement is one of the fixed relative positions in related to the different recording

medium's thickness. Not only one fixed relative position should be interpreted in Kishida et al.'s invention. As this can be evidenced in claim 3. In claim 3, a gap is judged between the nozzle opening surface and the capping unit upon receiving a cleaning instruction for said print heads, the gap is so controlled to be a predetermined distance in proportion (or in response to) to the thickness of the printing medium. In another words, first medium thickness produces a first gap, a second medium thickness produces a second gap, which is different from the first gap and so on so forth.

Therefore, the gap between the heads and the capping device varies and it is true that the gap will hold a fixed relative position between the heads and the capping means. However, this gap is only one of the gaps. Because when the thickness of the recording medium changes, the platen-gap regulating means regulates such gap such that a new gap will be produced.

Therefore, the stopping position of the carriage in the instant application is a position as to how far the heads in the carriage are away from the capping device. Because the carriage having the heads has to be in a stop position that is on top of the capping device in order for the capping device to perform its function.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 703-305-4961. The examiner can normally be reached on 7:30AM -5:00PM.


Application/Control Number: 10/068,007  
Art Unit: 2861

Page 18


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Fuller can be reached on 703-308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

SHIH-WEN HSIEH  
PRIMARY EXAMINER

  
Shih-wen Hsieh  
Examiner  
Art Unit 2861

SWH

  
December 3, 2003